

AMENDMENTS IN THE CLAIMS

The listing of claims will replace all prior versions, and listings, of the claims in the application:

Listing of Claims:

36. (Currently amended) A wall designed to resist lateral forces imposed on a building incorporating said wall, said building having an underlying structural component supporting said wall, said wall comprising:

- a. a bottom plate resting on said underlying structural component of said building;
- b. a foundation anchor for connecting said bottom plate to said underlying structural component of said building;
- c. a plurality of vertically-disposed studs resting on said bottom plate;
- d. nails for connecting said plurality of vertically-disposed studs resting on said bottom plate;
- e. a top plate resting on said vertically-disposed studs;
- f. nails for connecting said top plate to said vertically-disposed studs;
- g. a shear-resisting assembly connected to said top plate and also connected to said underlying structural component and disposed between said top plate and said underlying structural component, said shear-resisting assembly including,
 1. a planar shear-resisting element made from wood, said planar shear-resisting element having a proximal face and a distal face, a top edge, a bottom edge and first and second side edges, said shear-resisting assembly also including,
 2. a wood top strut connected to said proximal face near said top edge of said shear-resisting element, and disposed substantially parallel to said top plate of said wall,
 3. a wood bottom strut connected to said proximal face near said bottom edge of said shear-resisting element,
 4. a wood first chord connected to said proximal face near said first side edge of said shear-resisting element,
 5. a wood second chord connected to said proximal face near said second side edge of said shear-resisting element, and

6. edge fasteners comprising common nails having a flanged head and shank portions of uniform diameter for connecting said top strut, said bottom strut, said first chord and said second chord to said shear-resisting element, said top and bottom struts and said first and second chords forming a supporting frame for said shear-resisting element, said shank portions of each of said nails being closely received by said shear-resisting element along said portion of said shank embedded in said shear-resisting element and one of said first chord, said second chord, said top strut or said bottom strut with said flanged head of said nails disposed adjacent to said distal face of said shear-resisting element;

7. boundary edging members disposed on said shear-resisting element at said first and second side edges, each of said boundary edging members having an elongated leg that receives a plurality of said edge fasteners, each of[,] said boundary edging members being pierced by said shank portions of said edge fasteners through said elongated leg and thereby strengthening the connection made by said edge fasteners piercing said boundary edging members;

h. top plate fasteners, having a threaded shank portion, for connecting said shear-resisting assembly to said top plate of said wall, each said top plate fastener being closely received by both said top plate of said wall and said top strut of said shear resisting assembly; and

i. one or more foundation anchors for connecting said shear-resisting assembly to said underlying structural component of said building.

37. (Currently amended) A wall designed to resist lateral forces imposed on a building incorporating said wall, said building having an underlying structural component supporting said wall, said wall comprising:

- a. a bottom plate resting on said underlying structural component of said building;
- b. means for connecting said bottom plate to said underlying structural component of said building;
- c. a plurality of vertically-disposed studs resting on said bottom plate;

d. means for connecting said plurality of vertically-disposed studs to said bottom plate;

e. a top plate resting on said vertically-disposed studs;

f. means for connecting said top plate to said vertically-disposed studs;

g. a shear resisting assembly connected to said top plate and also connected to said underlying structural component and disposed between said top plate and said underlying structural component, said shear-resisting assembly including,

1. a planar shear-resisting element made from wood, said planar shear-resisting element having a proximal face and a distal face, a top edge, a bottom edge and first and second side edges, said shear-resisting assembly also including,
2. a wood top strut connected to said proximal face near said top edge of said shear-resisting element, and disposed substantially parallel to said top plate of said wall,
3. a wood bottom strut connected to said proximal face near said bottom edge of said shear-resisting element,
4. a wood first chord connected to said proximal face near said first side edge of said shear-resisting element,
5. a wood second chord connected to said proximal face near said second side edge of said shear-resisting element, and
6. edge fasteners comprising common nails having a flanged head and shank portions of uniform diameter for connecting said top strut, said bottom strut, said first chord and said second chord to said shear-resisting element, said top and bottom struts and said first and second chords forming a supporting frame for said shear-resisting element, said shank portions of each of said nails being closely received by said shear-resisting element along said portion of said shank embedded in said shear-resisting element and one of said first chord, said second chord, said top strut or said bottom strut with said flanged head of said nails disposed adjacent to said distal face of said shear-resisting element;
7. boundary edging members disposed on said shear-resisting element at said first and second side edges, each of said boundary edging

members having an elongated leg that receives a plurality of said edge fasteners, each of[[,]] said boundary edging members being pierced by said shank portions of said edge fasteners through said elongated leg and thereby strengthening the connection made by said edge fasteners piercing said boundary edging members;

h. means for connecting said shear-resisting assembly to said top plate of said wall; and

i. a foundation anchor for connecting said shear-resisting assembly to said underlying structural component of said building, said foundation anchor being designed to transmit lateral forces imposed on said underlying structural component to said shear-resisting assembly, and wherein said bottom strut is formed with an opening through which said foundation anchor passes, and said opening in said bottom strut is a notch in said bottom strut that allows said bottom strut to slide into place at a right angle to said planar shear-resisting element.

38. (Previously presented) The wall of claim 37, further comprising:
epoxy within said opening in said bottom strut to ensure close contact between said foundation anchor and said bottom strut.

39. (Currently amended) A wall designed to resist lateral forces imposed on a building incorporating said wall, said building having an underlying structural component supporting said wall, said wall comprising:

a. a bottom plate resting on said underlying structural component of said building;

b. means for connecting said bottom plate to said underlying structural component of said building;

c. a plurality of vertically-disposed studs resting on said bottom plate;

d. means for connecting said plurality of vertically-disposed studs to said bottom plate;

e. a top plate resting on said vertically-disposed studs;

f. means for connecting said top plate to said vertically-disposed studs;

g. a shear resisting assembly connected to said top plate and also connected to said underlying structural component and disposed between said top plate and said underlying structural component, said shear-resisting assembly including,

1. a planar shear-resisting element made from wood, said planar shear-resisting element having a proximal face and a distal face, a top edge, a bottom edge and first and second side edges, said shear-resisting assembly also including,
 2. a wood top strut connected to said proximal face near said top edge of said shear-resisting element, and disposed substantially parallel to said top plate of said wall,
 3. a wood bottom strut connected to said proximal face near said bottom edge of said shear-resisting element,
 4. a wood first chord connected to said proximal face near said first side edge of said shear-resisting element,
 5. a wood second chord connected to said proximal face near said second side edge of said shear-resisting element, and
 6. edge fasteners comprising common nails having a flanged head and shank portions of uniform diameter for connecting said top strut, said bottom strut, said first chord and said second chord to said shear-resisting element, said top and bottom struts and said first and second chords forming a supporting frame for said shear-resisting element, said shank portions of each of said nails being closely received by said shear-resisting element along said portion of said shank embedded in said shear-resisting element and one of said first chord, said second chord, said top strut or said bottom strut with said flanged head of said nails disposed adjacent to said distal face of said shear-resisting element;
 7. boundary edging members disposed on said shear-resisting element at said first and second side edges, each of said boundary edging members having an elongated leg that receives a plurality of said edge fasteners, each of[[,]] said boundary edging members being pierced by said shank portions of said edge fasteners through said elongated leg and thereby strengthening the connection made by said edge fasteners piercing said boundary edging members;
- h. means for connecting said shear-resisting assembly to said top plate of said wall;

- i. means for connecting said shear-resisting assembly to said underlying structural component of said building;
- j. first and second anchor bolts that are anchored to said underlying structural component and are disposed near said first and second chords;
- k. first and second holdowns that receive said first and second anchor bolts;
- l. nuts that are fitted on said first and second anchor bolts and engage said first and second holdowns;
- m. means for connecting said first and second holdowns to said first and second chords, and wherein;
- n. said bottom strut is formed with anchor bolt openings through which said first and second anchor bolts pass, said anchor bolt openings in said bottom strut being notches in said bottom strut that allow said bottom strut to slide into place at a right angle to said planar shear-resisting element, and are oversized to accommodate mis-installation of said first and second anchor bolts in said underlying structural component.

40. (Currently amended) The wall of claim 39, wherein:

- a. said first and second holdowns are formed with slotted openings that are oriented in the same direction as, and are in general alignment with, said notches in said bottom strut, when said first and second holdowns are attached to said first and second chords, said slotted openings receiving said first and second anchor bolts; and
- b. said first and second holdowns are formed with portals to allow said shear-resisting assembly to be slid into place at a right angle to said planar shear-resisting element.

41. (Currently amended) A wall designed to resist lateral forces imposed on a building incorporating said wall, said building having an underlying structural component supporting said wall, said wall comprising:

- a. a bottom plate resting on said underlying structural component of said building;
- b. means for connecting said bottom plate to said underlying structural component of said building;
- c. a plurality of vertically-disposed studs resting on said bottom plate;
- d. means for connecting said plurality of vertically-disposed studs to said bottom plate;

- e. a top plate resting on said vertically-disposed studs;
- f. means for connecting said top plate to said vertically-disposed studs;
- g. a shear resisting assembly connected to said top plate and also connected to said underlying structural component and disposed between said top plate and said underlying structural component, said shear-resisting assembly including,
 - 1. a planar shear-resisting element made from wood, said planar shear-resisting element having a proximal face and a distal face, a top edge, a bottom edge and first and second side edges, said shear-resisting assembly also including,
 - 2. a wood top strut connected to said proximal face near said top edge of said shear-resisting element, and disposed substantially parallel to said top plate of said wall,
 - 3. a wood bottom strut connected to said proximal face near said bottom edge of said shear-resisting element,
 - 4. a wood first chord connected to said proximal face near said first side edge of said shear-resisting element,
 - 5. a wood second chord connected to said proximal face near said second side edge of said shear-resisting element, and
 - 6. edge fasteners comprising common nails having a flanged head and shank portions of uniform diameter for connecting said top strut, said bottom strut, said first chord and said second chord to said shear-resisting element, said top and bottom struts and said first and second chords forming a supporting frame for said shear-resisting element, said shank portions of each of said nails being closely received by said shear-resisting element along said portion of said shank embedded in said shear-resisting element and one of said first chord, said second chord, said top strut or said bottom strut with said flanged head of said nails disposed adjacent to said distal face of said shear-resisting element;
 - 7. boundary edging members disposed on said shear-resisting element at said first and second side edges, each of said boundary edging members having an elongated leg that receives a plurality of said edge fasteners, each of[[,]] said boundary edging members being pierced by

said shank portions of said edge fasteners through said elongated leg and thereby strengthening the connection made by said edge fasteners piercing said boundary edging members;

h. means for connecting said shear-resisting assembly to said top plate of said wall;

i. means for connecting said shear-resisting assembly to said underlying structural component of said building[[:]];

j. first and second anchor bolts that are anchored to said underlying structural component and are disposed near said first and second chords;

k. first and second holdowns that receive said first and second anchor bolts;

l. nuts that are fitted on said first and second anchor bolts and engage said first and second holdowns;

m. holdown fasteners, having a threaded shank portion and flanged head, for connecting said first and second holdowns to said first and second chords, and wherein;

n. said bottom strut is formed with anchor bolt openings through which said first and second anchor bolts pass.

42. (Currently amended) The wall of claim 41, wherein,

said threaded holdown fasteners are inserted only a selected distance into said first and second chords without passing all the way through said first and second chords and said flanged heads of said holdown fasteners are disposed on inner faces of the first and second chords.

43. (Currently amended) A wall designed to resist lateral forces imposed on a building incorporating said wall, said building having an underlying structural component supporting said wall, said wall comprising:

a. a bottom plate resting on said underlying structural component of said building;

b. means for connecting said bottom plate to said underlying structural component of said building;

c. a plurality of vertically-disposed studs resting on said bottom plate;

d. means for connecting said plurality of vertically-disposed studs to said bottom plate;

e. a top plate resting on said vertically-disposed studs;

f. means for connecting said top plate to said vertically-disposed studs;

g. a shear resisting assembly connected to said top plate and also connected to said underlying structural component and disposed between said top plate and said underlying structural component, said shear-resisting assembly including,

1. a planar shear-resisting element made from wood, said planar shear-resisting element having a proximal face and a distal face, a top edge, a bottom edge and first and second side edges, said shear-resisting assembly also including,
2. a wood top strut connected to said proximal face near said top edge of said shear-resisting element, and disposed substantially parallel to said top plate of said wall,
3. a wood bottom strut connected to said proximal face near said bottom edge of said shear-resisting element,
4. a wood first chord connected to said proximal face near said first side edge of said shear-resisting element,
5. a wood second chord connected to said proximal face near said second side edge of said shear-resisting element, and
6. edge fasteners consisting of common nails having a flanged head and shank portions of uniform diameter for connecting said top strut, said bottom strut, said first chord and said second chord to said shear-resisting element, said top and bottom struts and said first and second chords forming a supporting frame for said shear-resisting element, said shank portions of each of said nails being closely received by said shear-resisting element along said portion of said shank embedded in said shear-resisting element and one of said first chord, said second chord, said top strut or said bottom strut with said flanged head of said nails disposed adjacent to said distal face of said shear-resisting element;

h. means for connecting said shear-resisting assembly to said top plate of said wall;

i. means for connecting said shear-resisting assembly to said underlying structural component of said building;

j. boundary edging members disposed on said shear-resisting element at said top and bottom edges and said first and second side edges that are pierced

by said shank portions of said edge fasteners and thereby strengthen the connection made by said edge fasteners, and wherein said boundary edging members are u-shaped channels, having a pair of legs that receive a plurality of said edge fasteners joined by a central member that embrace said shear-resisting element, each of said edge fasteners passing through each of said legs of said u-shaped channels.

44. (Currently amended) A wall designed to resist lateral forces imposed on a building incorporating said wall, said building having an underlying structural component supporting said wall, said wall comprising:

- a. a bottom plate resting on said underlying structural component of said building;
- b. means for connecting said bottom plate to said underlying structural component of said building;
- c. a plurality of vertically-disposed studs resting on said bottom plate;
- d. means for connecting said plurality of vertically-disposed studs to said bottom plate;
- e. a top plate resting on said vertically-disposed studs;
- f. means for connecting said top plate to said vertically-disposed studs;
- g. a shear resisting assembly connected to said top plate and also connected to said underlying structural component and disposed between said top plate and said underlying structural component, said shear-resisting assembly including,
 - 1. a planar shear-resisting element made from wood, said planar shear-resisting element having a proximal face and a distal face, a top edge, a bottom edge and first and second side edges, said shear-resisting assembly also including,
 - 2. a wood top strut connected to said proximal face near said top edge of said shear-resisting element, and disposed substantially parallel to said top plate of said wall,
 - 3. a wood bottom strut connected to said proximal face near said bottom edge of said shear-resisting element,
 - 4. a wood first chord connected to said proximal face near said first side edge of said shear-resisting element,

5. a wood second chord connected to said proximal face near said second side edge of said shear-resisting element, each of said first and second chords of said shear-resisting assembly being formed from two elongated wood members, laminated together, and

6. edge fasteners comprising common nails having a flanged head and shank portions of uniform diameter for connecting said top strut, said bottom strut, said first chord and said second chord to said shear-resisting element, said top and bottom struts and said first and second chords forming a supporting frame for said shear-resisting element, said shank portions of each of said nails being closely received by said shear-resisting element along said portion of said shank embedded in said shear-resisting element and one of said first chord, said second chord, said top strut or said bottom strut with said flanged head of said nails disposed adjacent to said distal face of said shear-resisting element;

7. boundary edging members disposed on said shear-resisting element at said first and second side edges, each of said boundary edging members having an elongated leg that receives a plurality of said edge fasteners, each of[[,]] said boundary edging members being pierced by said shank portions of said edge fasteners through said elongated leg and thereby strengthening the connection made by said edge fasteners piercing said boundary edging members, said elongated leg of the boundary edging member being disposed on said distal face of said planar shear-resisting element and said flanged head of said nail contacts said elongated leg of said boundary edging member;

h. means for connecting said shear-resisting assembly to said top plate of said wall;

i. means for connecting said shear-resisting assembly to said underlying structural component of said building.

45. (Currently amended) A wall designed to resist lateral forces imposed on a building incorporating said wall, said building having an underlying structural component supporting said wall, said wall comprising:

- a. a bottom plate resting on said underlying structural component of said building;
- b. means for connecting said bottom plate to said underlying structural component of said building;
- c. a plurality of vertically-disposed studs resting on said bottom plate;
- d. means for connecting said plurality of vertically-disposed studs to said bottom plate;
- e. a top plate resting on said vertically-disposed studs;
- f. means for connecting said top plate to said vertically-disposed studs;
- g. a shear resisting assembly connected to said top plate and also connected to said underlying structural component and disposed between said top plate and said underlying structural component, said shear-resisting assembly including,

- 1. a planar shear-resisting element made from wood, said planar shear-resisting element having a proximal face and a distal face, a top edge, a bottom edge and first and second side edges, said shear resisting element comprising a plurality of adjoining structural panels disposed in a single plane, forming joints between said structural panels, said shear-resisting assembly also including,
- 2. a wood top strut connected to said proximal face near said top edge of said shear-resisting element, and disposed substantially parallel to said top plate of said wall,
- 3. a wood bottom strut connected to said proximal face near said bottom edge of said shear-resisting element,
- 4. a wood first chord connected to said proximal face near said first side edge of said shear-resisting element,
- 5. a wood second chord connected to [[said]] said proximal face near said second side edge of said shear-resisting element, laminated together, and
- 6. edge fasteners comprising common nails having a flanged head and shank portions of uniform diameter for connecting said top strut, said bottom strut, said first chord and said second chord to said shear-resisting element, said top and bottom struts and said first and second chords forming a supporting frame for said shear-resisting element,

said shank portions of each of said nails being closely received by said shear-resisting element along said portion of said shank embedded in said shear-resisting element and one of said first chord, said second chord, said top strut or said bottom strut with said flanged head of said nails disposed adjacent to said distal face of said shear-resisting element;

7. boundary edging members disposed on said shear-resisting element at said first and second side edges, each of said boundary edging members having an elongated leg that receives a plurality of said edge fasteners, each of[[,]] said boundary edging members being pierced by said shank portions of said edge fasteners through said elongated leg and thereby strengthening the connection made by said edge fasteners piercing said boundary edging members;

h. means for connecting said shear-resisting assembly to said top plate of said wall;

i. means for connecting said shear-resisting assembly to said underlying structural component of said building.

46. (Previously presented) The wall of claim 45, wherein said shear-resisting assembly further comprises:

a. intermediate studs disposed between said top and bottom struts of said shear-resisting element;

b. means for connecting said intermediate studs to said top and bottom struts;

c. means for connecting said intermediate studs to said structural panels;
and

wherein selected intermediate studs are disposed at said joints of said structural panels, serving to connect said structural panels together.

47. (Previously presented) A wall designed to resist lateral forces imposed on a building incorporating said wall, said building having an underlying structural component supporting said wall, said wall comprising:

a. a bottom plate resting on said underlying structural component of said building;

b. means for connecting said bottom plate to said underlying structural component of said building;

- c. a plurality of vertically-disposed studs resting on said bottom plate;
- d. means for connecting said plurality of vertically-disposed studs to said bottom plate;
- e. a top plate resting on said vertically-disposed studs;
- f. means for connecting said top plate to said vertically-disposed studs;
- g. a shear resisting assembly connected to said top plate and also connected to said underlying structural component and disposed between said top plate and said underlying structural component, said shear-resisting assembly including,
 - 1. a planar shear-resisting element, said planar shear-resisting element having a proximal face and a distal face, a top edge, a bottom edge and first and second side edges, said shear-resisting assembly also including,
 - 2. a top strut connected to said proximal face near said top edge of said shear-resisting element, and disposed substantially parallel to said top plate of said wall,
 - 3. a bottom strut connected to said proximal face near said bottom edge of said shear-resisting element,
 - 4. a first chord connected to said proximal face near said first side edge of said shear-resisting element,
 - 5. a second chord connected to said [[said]] proximal face near said second side edge of said shear-resisting element, and
 - 6. means for connecting said top strut, said bottom strut, said first chord and said second chord to said shear-resisting element, said top and bottom struts and said first and second chords forming a supporting frame for said shear-resisting element, said means consisting of edge fasteners having shank portions;
- h. means for connecting said shear-resisting assembly to said top plate of said wall;
- i. means for connecting said shear-resisting assembly to said underlying structural component of said building;
- j. boundary edging members disposed on said shear-resisting element at said top and bottom edges and said first and second side edges that are pierced by said shank portions of said edge fasteners and thereby strengthen the

connection made by said edge fasteners, and wherein said boundary edging members are u-shaped channels, having a pair of legs joined by a central member that embrace said shear-resisting element, each of said edge fasteners passing through each of said legs of said u-shaped channels; and wherein;

k. said means for connecting said shear-resisting assembly to said underlying structural component is a foundation anchor anchored to said underlying structural component, said foundation anchor being designed to transmit lateral forces imposed on said underlying structural component to said shear resisting assembly, and said bottom strut is formed with an opening through which said foundation anchor passes, and said opening in said bottom strut is oversized to accommodate mis-installation of said foundation anchor in said underlying structural component, and epoxy is placed within said opening in said bottom strut to ensure close contact between said foundation anchor and said bottom strut.